

Clear Lake
Steuben County

Watershed Analysis

June 11, 1993

Prepared for
Clear Lake Township Land Conservancy, Inc.

Prepared by
J.F. New & Associates, Inc.
708 Roosevelt Road
Walkerton, IN 46574
(219) 586-3400

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I. INTRODUCTION

Clear Lake is a 780-acre spring-fed lake located in the far northeast corner of Steuben County, Indiana (Figure 1). The lake comprises 18% of the 4307-acre watershed (Figure 2). The Town of Clear Lake surrounds the lake. Four legal drains flow into the lake, draining predominantly agricultural land and the residential areas.

This project was initiated to investigate and identify solutions to the problem of declining water quality in Clear Lake. The Indiana Department of Environmental Management (IDEM) rates Indiana's lakes in terms of trophic status, or nutrient enrichment, based on measurements of numerous physical, chemical, and biological parameters. Data from the 1988-89 report identify Clear Lake as a Class One lake, which is the highest classification. But in the last few years, lake residents have observed increased growth of aquatic macrophytes and algae, which can limit the recreational use of the lake and reduce its aesthetic appeal.

Eutrophication, or nutrient enrichment, of Indiana's lakes is becoming a greater problem, and a number of factors can lead to declining water quality. Pollutants, such as sediments and nutrients, can enter the lake system through point or nonpoint sources. Point source pollution originates from a discrete and identifiable point, such as a pipe or effluent outfall. Nonpoint source pollution (NPS) enters the water system through runoff from the land surface and its origin cannot be uniquely identified. NPS is more difficult to treat and requires modification of land use activities to control the problem. Increased sediment loads cause the lake basin to become more shallow, and may also lead to an expansion of the littoral (shoreline) plant community. Increased nutrient loads associated with the sediments or dissolved in runoff may encourage vegetation development. Cultural eutrophication is defined as the increase of productivity and sedimentation rates as a direct result of activities of humans within the watershed, and includes increased nutrient loads in runoff from lawn fertilizers, agricultural fertilizers, livestock operations, discharge from failing septic systems, and sediment runoff.

Erosion of soil from farmlands is an area of major concern and one which has received greater attention in the past decade. The Food Security Act of 1985 established conservation compliance requirements on Highly Erodible Lands (HEL). The United States Department of Agriculture (USDA) has defined HEL as land where the "*potential* maximum erosion is greater than eight times the rate at which the soil can erode and maintain productivity". Highly erodible fields are defined as those fields with more than 50 acres of highly erodible soils, or one-third or more of the area is highly erodible soils. Although a farm field may maintain a certain level of agricultural productivity with a tolerable rate of soil loss according to USDA standards, the amount of sediment flowing into the waterways within the watershed may still cause significant water quality degradation. It is also necessary to point out that even when USDA and HEL criteria are controlled, there can be very large amounts of sediment runoff which can have major impacts on lake water quality.

Figure 1: Clear Lake, Steuben County, Indiana

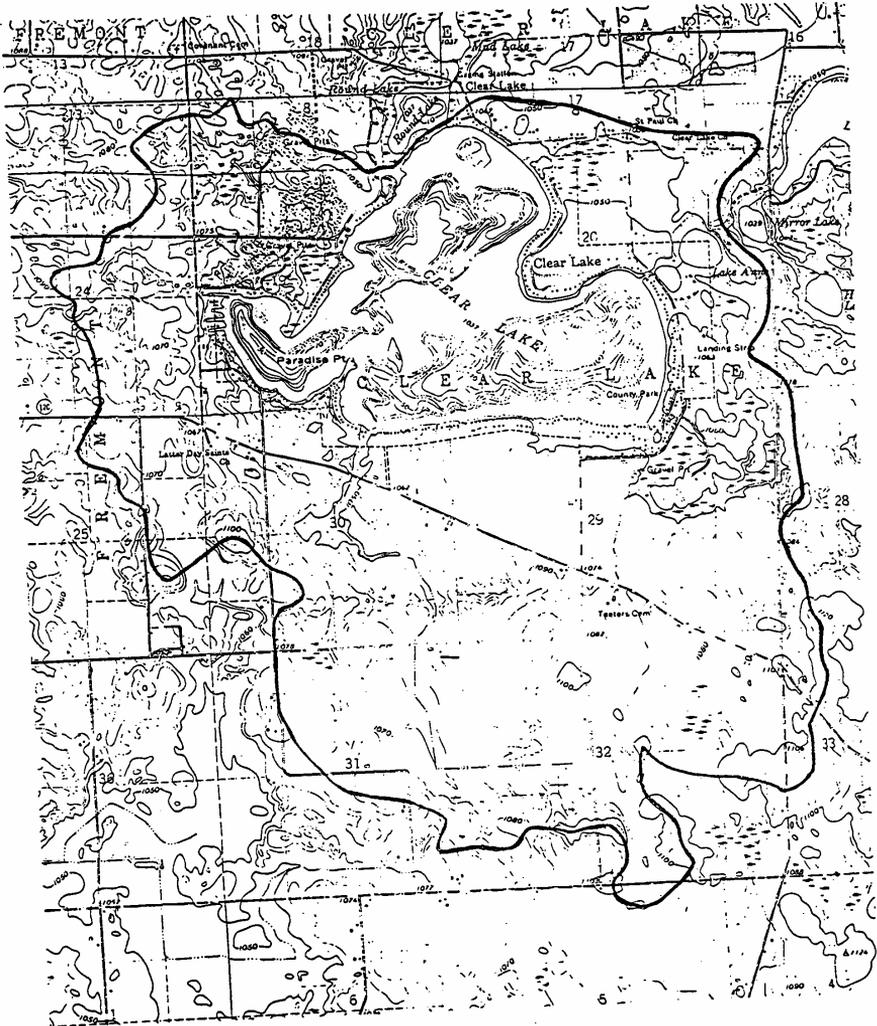


Steuben County, Indiana

J.F. New & Associates, Inc.
706 Roosevelt Road
P.O. Box 243
Warrington, IN 46774
Phone: 219-568-3400
FAX: 219-568-3448

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Figure 2: Clear Lake Watershed



**J.F. New & Associates, Inc.**
708 Roosevelt Road
P.O. Box 243
Waterton, NJ 08576
Phone: 218-566-3400
FAX: 218-566-3418

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\$9,000.00 for study

This, in limited magnitude, is occurring within the Clear Lake watershed.

II. OVERVIEW OF THE STUDY

This study was designed to evaluate the Clear Lake watershed and to provide the Clear Lake Township Land Conservancy (CLTLC) with watershed management recommendations. Information for this report was gathered through:

- A. study of watershed maps designating Highly Erodible Lands obtained from the Steuben County Soil and Water Conservation District the Agricultural Stabilization and Conservation Service (ASCS).
- B. examination of land use practices from field inspections to identify sediment and nutrient "hotspots" in the Clear Lake watershed. The study looked at the effectiveness of implementing appropriate land treatment measures in reducing sediment and nutrient transport to Clear Lake.

III. WATERSHED SURVEY

1.16% watershed wetlands

A. Wetlands and Soils Maps

Excellent

Review of the maps developed by the National Wetlands Inventory (NWI) and Soil Conservation Service (SCS) are useful for studying the watershed before performing a field survey. Figure 3 shows the areas identified as wetlands on the NWI map. Approximately 443 acres (10% of the watershed) is classified as wetland and most are located in the southern and eastern portion of the watershed. It is important to note that this map was not developed for the purpose of establishing the definitive presence or absence of wetlands, but is valuable to obtain a general feel of the relative abundance of wetlands in the Clear Lake watershed. Wetlands serve as natural sediment and nutrient traps and function to improve the quality of the water flowing into the receiving stream or lake.

Figure 4 shows the location of soils which are designated HEL in the Clear Lake watershed. Listed below are the soil types in Steuben County defined as HEL:

- BoC Boyer-Ormas loamy sands, 6 to 12 percent slopes
- BoD Boyer-Ormas loamy sands, 12 to 18 percent slopes
- GnB Glynwood silt loam, 2 to 6 percent slopes
- KsC Kosciusko gravelly sandy loam, 6 to 12 percent slopes

Figure 3: Wetlands identified by the National Wetlands Inventory Map within the Clear Lake Watershed





 708 Roosevelt Road
 P.O. Box 243
 Warkton, VA 44374
 Phone: 219-525-3400
 Fax: 219-525-3446

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Figure 4: Highly Erodible Lands in the Clear Lake Watershed



 **J.F. New & Associates, Inc.**
706 Roosevelt Road
P.O. Box 243
Washouak, WA 98576
Phone: 313-526-5400
Fax: 313-526-3416

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MbC	Martinsville loam, 6 to 12 percent slopes
MhB	Miami loam, 2 to 6 percent slopes
MhC	Miami loam, 6 to 12 percent slopes
MkC3	Miami clay loam, 6 to 12 percent slopes, severely eroded
MoC2	Morley silt loam, 6 to 12 percent slopes, eroded
MoD2	Morley silt loam, 12 to 18 percent slopes, eroded
MoE2	Morley silt loam, 18 to 25 percent slopes
MrC3	Morley silty clay loam, 6 to 12 percent slopes, severely eroded
MrD3	Morley silty clay loam, 12 to 18 percent slopes, severely eroded
RaB	Rawson loam, 2 to 6 percent slopes
Ud	Udorthents, loamy

Approximately 2275 acres (52% of the watershed) is designated HEL, and much of this land borders the lake on the west, south and east sides. Comparison of the NWI map and soils map designating HEL is useful for ascertaining the location and relative proportion of highly erodible soils to the area of wetlands. It can be seen in the Clear Lake watershed, there is a much lower percentage of wetlands relative to the percentage of HEL. In addition, the wetlands are not located in areas of HEL. Although no cause and effect relationship can be claimed, these observations may be useful in the conducting the field survey.

B. Cyrus Brouse Ditch

The Cyrus Brouse Ditch drains a 1213.6 acre sub-watershed on the south side of the lake, off Clear Lake Road, just west of County Road 800 E (Figure 5). The Cyrus Brouse Ditch is gently sloped and the sides are vegetated, which protects the banks from erosion. The buffer area between the field and the ditch could be widened to reduce sediment and nutrient loading to the ditch from surface runoff. Forested wetlands scattered throughout the upper portion of the sub-watershed provides natural filtration of nutrients and sediments and these wetlands should be vigorously protected.

Approximately 623 acres (53%) of this sub-watershed is designated HEL. The majority of this land was observed to be in grass or pasture and therefore not a major source of nutrient or sediment loading to the inlet ditch. Some of the land is enrolled in the federal Conservation Reserve Program (CRP), a government program which allows landowners to receive annual payments on land retired to permanent cover for 10 years (grass) or 15 years (trees). HEL or areas critical to water quality are eligible for this program. The Lake Association should encourage landowners to maintain HEL in protective cover. Preventing these soils from eroding and washing into the lake is much cheaper than removing the sediments from the lake.

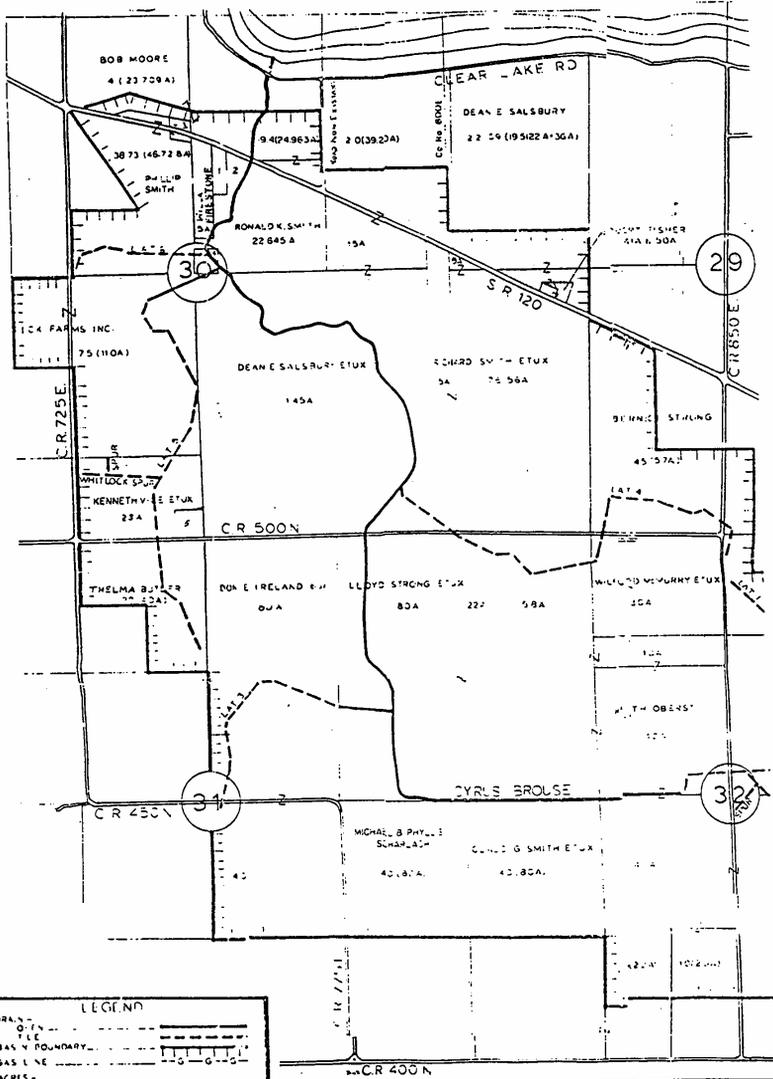
Livestock operations do not appear to be contributing to water quality problems in this sub-watershed.

widen
buffer
on
ditch

good

No waste

Figure 5: Cyrus Brouse Ditch



LEGEND	
DRAIN	—————
QTY	—————
FEET	—————
BASIN BOUNDARY	—————
GAS LINE	—————
ACRES	—————
IN FRINGE	—————
BENEFITTED	—————
TOTAL BASIN ACRES	1279.6
DRAIN LENGTH (MILES)	27.4
CPLY	276
FILE	167
DRAIN PLOTTED ON AERIAL PHOTOS 1973-74 & 81	





J.F. New & Associates, Inc.

 708 Roosevelt Road

 P.O. Box 243

 Warrenton, N 97146

 Phone: 503-868-3400

 Fax: 503-868-3448

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C. Harry Teeters Ditch

The Harry Teeters Ditch drains a 500.5 acre sub-watershed on the southeast side of the watershed (Figure 6). The Indiana Department of Natural Resources (IDNR) public access landing is located at the mouth of the ditch. Highly erodible lands make up approximately 365 acres (73%) of the watershed. The majority of this ground was observed to be in grass or pasture and therefore is not a major source of nutrient or sediment loading to the lake. The Lake Association should encourage landowners in this sub-watershed to leave HEL in protective cover. Preventing these soils from eroding and washing into the lake is much cheaper than removing the sediment from the lake. A large forested wetland located just above the lake protects the lower watershed, and more importantly, provides excellent natural filtration to the ditch waters. This watershed probably delivers the clearest water to the lake of any sub-watershed and several organisms which are indicators of high water quality were present in the stream channel. This wetland should be vigorously protected, and if possible, deed restricted or given classified wildlife habitat status for the wetland. The value of the wetland to protect the quality of the lake water is far greater than its land value for development purposes.

good water quality
Protect wetland
conservation

Livestock operations do not appear to be contributing to water quality problems in this sub-watershed.

D. Alvin Patterson Ditch

The Alvin Patterson Ditch is a 162.9 acre sub-watershed on the northeast side of the lake (Figure 7). This sub-watershed is entirely residential development. Visual observations of water quality near the outlet to Round Lake and along the north side lake reveal higher nutrient levels, as evidenced by the presence of extensive algal growth. A concrete sedimentation basin is located at the mouth of the ditch to trap incoming sediment, but does not function to reduce the dissolved nutrient load to the lake. Minimizing the use of lawn fertilizers would reduce the potential nutrient load to the lake.

Watershed land
+ treatment
reduces
to loadings
in Round Lake

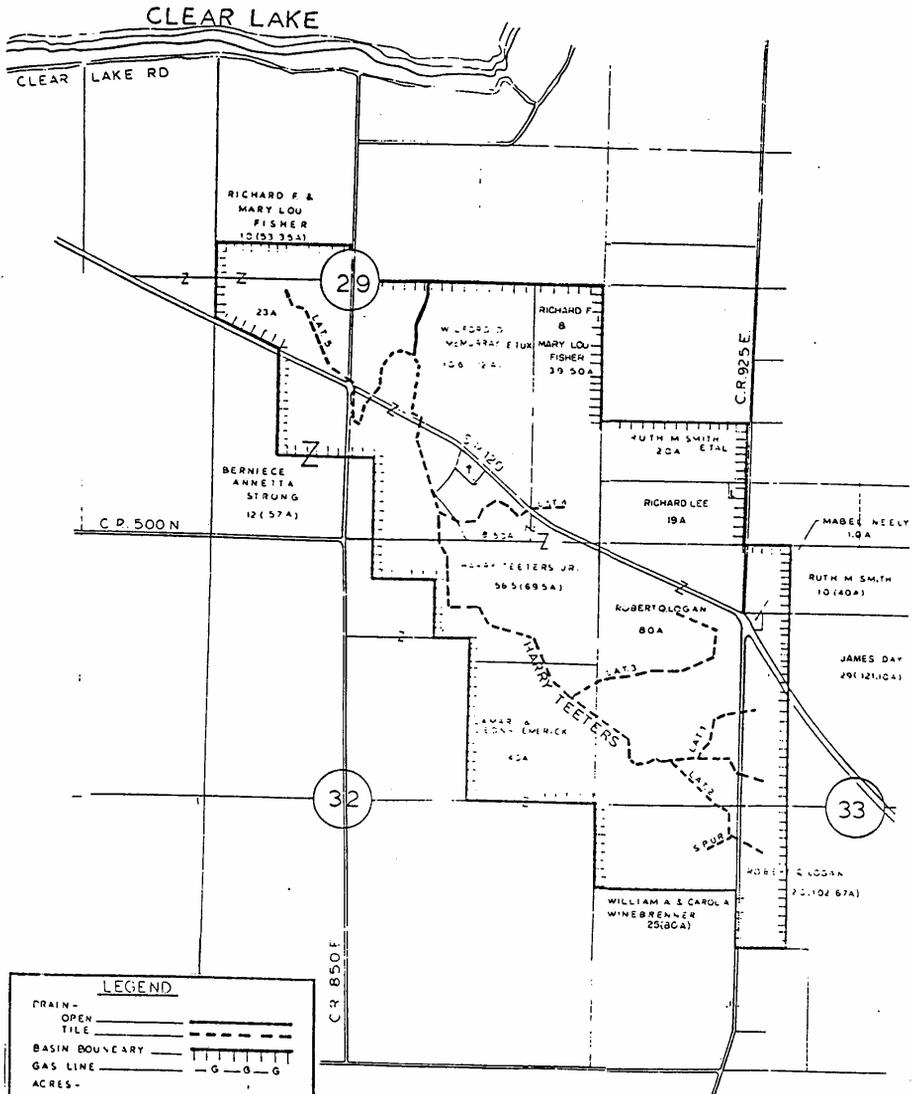
E. Peter Smith Ditch

The Peter Smith Ditch drains a 179.04 acre sub-watershed on the west side of the lake and drains into the lake off County Road 700 E near the marina, just north of Clear Lake Road (Figure 8). Clear Lake is not well protected from watershed activities by natural wetland systems on the west side of the lake and extensive algae growth on this side of the lake is indicative of higher nutrient loading. The houses in Quiet Harbor are built on fill material in a shallow water table, and no buffer zone exists between the yards and the lake to trap nutrient and sediment runoff into the lake. Approximately 171 acres (95%) is designated HEL. The farmland in this sub-watershed is steeply sloped and the fields are planted in row crops, which provide less protection from soil erosion than a grass cover. During heavy rain



work with
SWCD on
cropped area

Figure 6: Harry Teeters Ditch



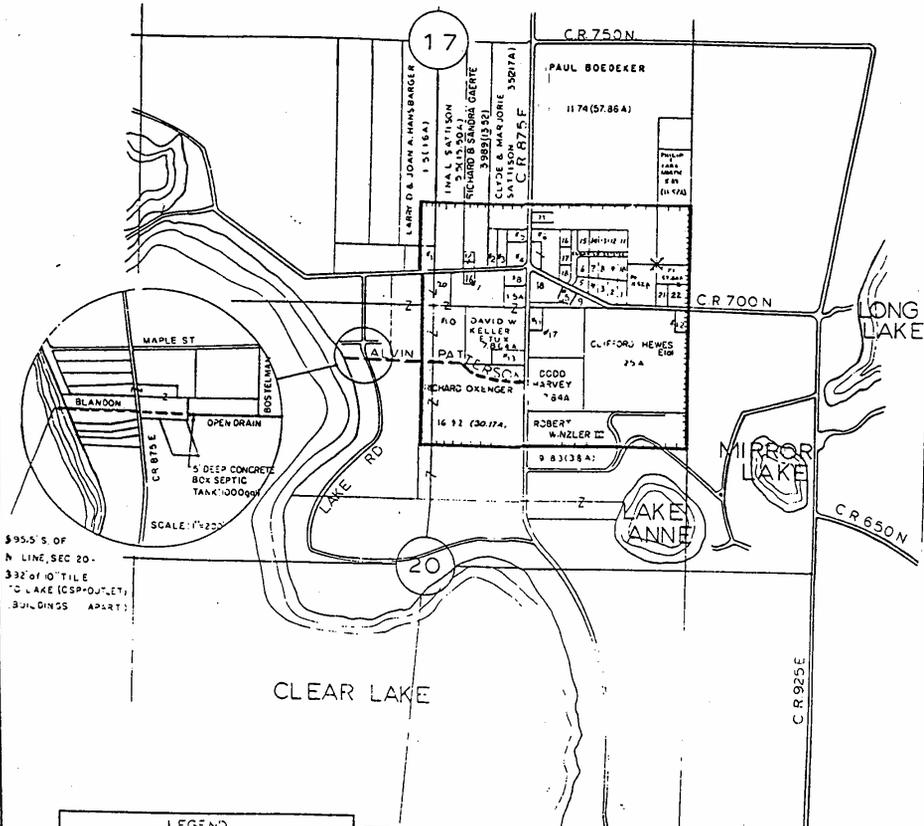
LEGEND	
DRAIN -	
OPEN	—————
TILE	—————
BASIN BOUNDARY	-----
GAS LINE	— G — G — G —
ACRES -	
IN TRACT	----- (---) A
BENEFITTED	----- A
TOTAL BASIN ACRES	51.550
DRAIN LENGTH (MILES) -	2.53304
OPEN	0.65
TILE	2.45
DRAIN PLOTTED ON AERIAL PHOTOS	




U.F. New & Associates, Inc.
 706 Roosevelt Road
 P.O. Box 213
 Waterloo, NJ 08476
 Phone: 219-568-3400
 FAX: 219-568-3418

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Figure 7: Alvin Patterson Ditch



\$95.5'S OF
N LINE, SEC 20-
332' of 10" TILE
TO LAKE (CSP-DUCT),
BUILDINGS APART

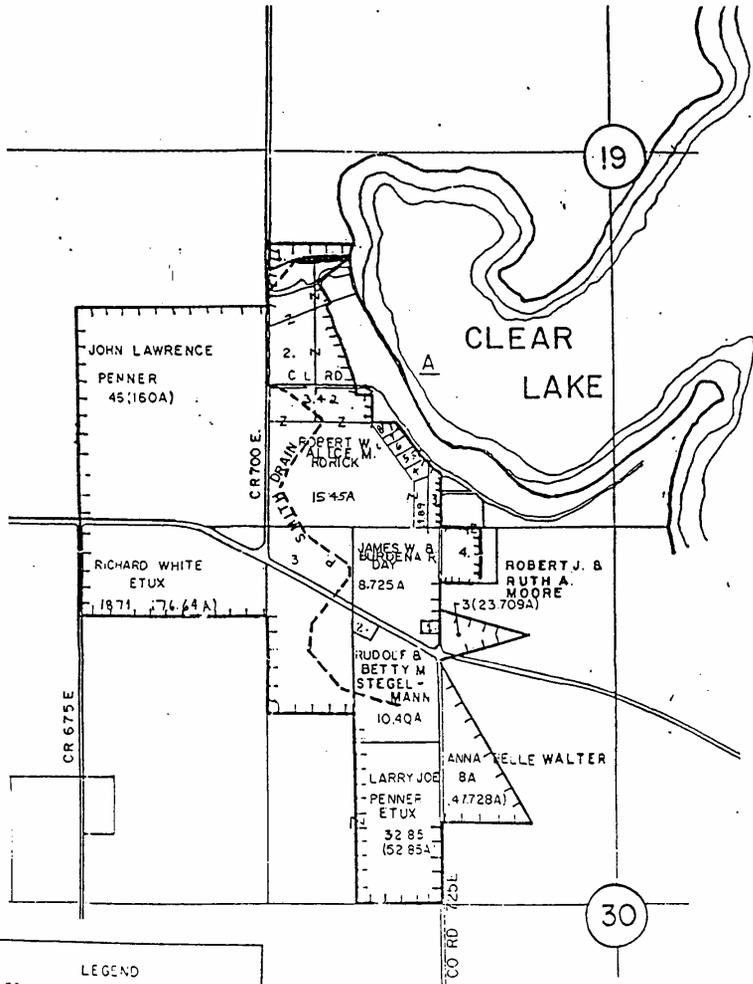
LEGEND	
DRAIN -	_____
OPEN	_____
TILE	_____
1/2" SIN BOUNDARY	_____
ACRES -	
IN TRACT	_____ (---A)
BENEFITTED	_____ (---A)
TOTAL BASIN ACRES	162.9
DRAIN LENGTH MILES -	_____
TILE	_____ .36
DRAWN PLOTTED ON AERIAL PHOTOS -	20071




E.J.F. New & Associates, Inc.
 706 Roosevelt Road
 P.O. Box 243
 Wallingford, VT 05476
 Phone: 810-526-3400
 Fax: 810-526-3448

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Figure 8: Peter Smith Ditch



LEGEND

D.T.C. - - - - -

OPEN - - - - -

TILE - - - - -

BASIN BOUNDARY - - - - -

GAS LINE - - G - - G - -

ACRES -

ACRES IN TRACT (---A)

BENEFITTED ACRES - - A

TOTAL BASIN ACRES 179.04

D.T.C. LENGTH (MILES) -

OPEN - - - - - 0.00

TILE - - - - - 1.01

DITCH PLOTTED ON AERIAL PHOTO NO



J.F. New & Associates, Inc.

700 Roosevelt Road
 P.O. Box 243
 Wallington, NJ 07697
 Phone: 219-562-3400
 FAX: 219-562-3115

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→ Maybe the Highway Dept. should look at the problems with milkpate

events, runoff from the farm field and the marina causes severe flooding problems on County Road 700 E, which could be a source of high nutrient and sediment loads. The County Highway Department is currently laying a tile and surface water collection structure from the culvert in the road to the lake to drain the water more quickly. This untreated water will discharge directly into the lake. One solution is to direct the flow from the tile into a created wetland to store and filter the water before it flows into the lake. A vegetated buffer strip on the west side of County Road 700 E, between the field and the road ^{also} reduce the sediment and nutrient load to the ditch.

Livestock operations were not observed to be present in this sub-watershed.

F. Development around Clear Lake

The majority of the land adjacent to the lake is residential development. Most of the homes have individual septic systems, although the marina and the homes in Quiet Harbor are connected to a cluster system, with the leach field located on the east side of County Road 700 E Road. Effluent from failing septic systems discharging into the lake can be a source of nutrient and bacterial loading to the lake. Conversations with the Steuben County Health Department revealed that there are no known problems with failing septic systems on Clear Lake. Yearly dye tests conducted around the lake by CLTLC have also not identified any problems.

no septic problems

IV. RECOMMENDATIONS

- A. Establish and maintain farming practices which minimize and prevent soil erosion as detailed in the Agricultural Conservation Program (ACP) listed in Appendix A. These practices are probably the single most effective program available to improve and maintain high water quality for Clear Lake. We would strongly recommend the Lake Association become involved with the ASCS and encourage farmers to participate in this program. For example, if a farmer is willing to put in a grassed waterway and the ASCS cost shares 80%, the Lake Association could offer to put up the additional 20%, or even 10%, of the cost share. Lake Association will never get as much impact for their dollars spent as with these conservation practices.
- B. Build a nutrient filter wetland and sediment trap on the Peter Smith Ditch in the low area just south of Clear Lake Road off County Road 700 E (Figure 9). A wetland could provide storage for water that currently floods 700 E and filtering capacity for nutrients and sediments runoff from the farm field, marina property, and flow from the Peter Smith Ditch. The tile currently being placed by the County Highway Department to alleviate the flooding problems would have to be re-routed and the Drainage Board may wish to abandon the section of tile under the created wetland.

- C. Plant a vegetated buffer strip on the west side of County Road 700 E, between the field and the road (Figure 9). A vegetated buffer strip will help trap the sediments and nutrients in the surface runoff from the field, before it flows into the ditch, and ultimately into Clear Lake.
- C. Build a sediment trap and nutrient filter wetland on Cyrus Brouse Ditch just south of Clear Lake Road (Figure 10). A wetland would provide filtering capacity for nutrients and sediments from this portion of the watershed. Construction along this ditch would not require re-routing any tile.
- D. Increase the width of the vegetated buffer strips along the Cyrus Brouse Ditch (Figure 10). Buffer strips would help reduce the nutrient and sediment load into the ditch from farming activities on the field.

V. PERMIT REQUIREMENTS AND COST ESTIMATE

Any construction in a legal drain, within 75 feet of the ditch bank, requires approval from the Steuben County Drainage Board. The Steuben County Planning Commission is drafting an Erosion Control Plan to be adopted in 1993, which may require a county permit for certain construction activities. At this time, all construction activities around the lake are deferred to the IDNR. The IDNR requires a construction in a lake permit for any activity which may change the water level or shoreline, such as excavating or filling in the lake. The IDNR requires a construction in a floodway permit for erecting or maintaining a structure in the floodway.

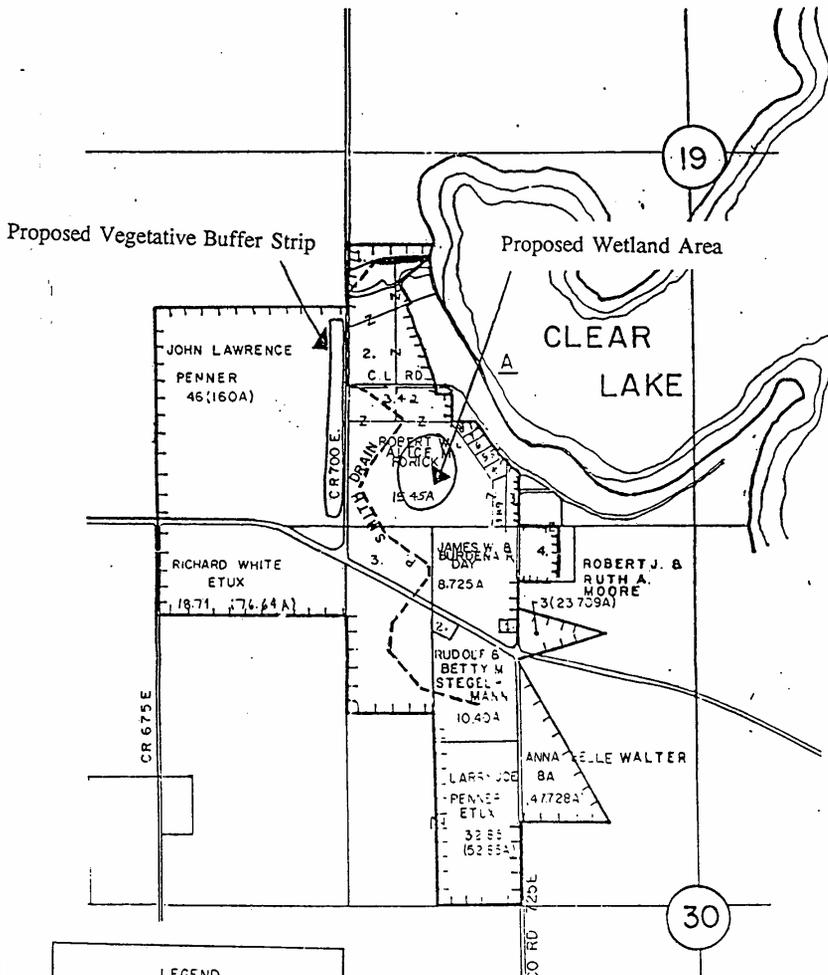
A cost estimate for preparing permit applications for these agencies is between \$1500 and \$6000.

VI. EVALUATION OF FUNDING PROGRAMS

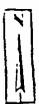
A. Agricultural Conservation Program

The Agricultural Stabilization and Conservation Service (ASCS) administers the Agricultural Conservation Program (ACP), which provides cost-sharing to farmers for approved practices. Practices which are currently available to producers in Steuben County are listed in Appendix A.

Figure 9: Proposed Wetland Area and Vegetated Buffer Strip on Peter Smith Ditch



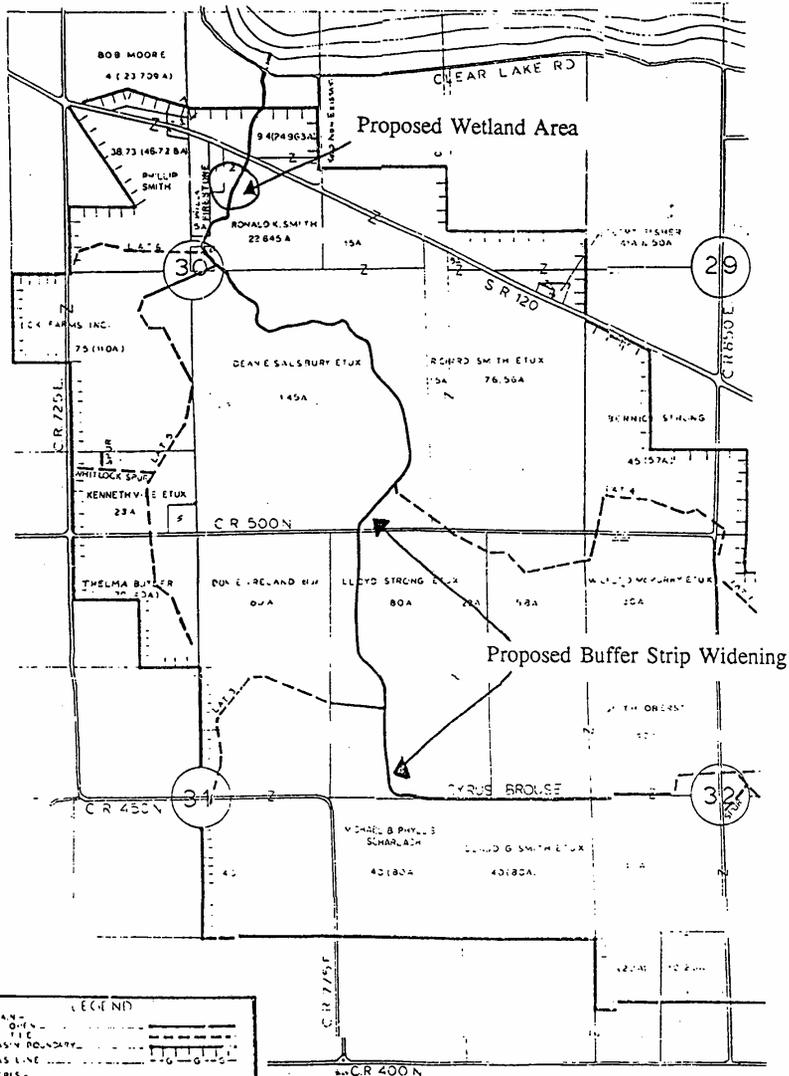
LEGEND	
DITCH	—
OPEN TILE	—
EASEMENT BOUNDARY	—
GAS LINE	—G—G—
ACRES IN TRACT	(...A)
BENEFITTED ACRES	---A
TOTAL BASIN ACRES	179.64
DITCH LENGTH (MILES)	0.00
OPEN TILE	101
DITCH PLOTTED ON AERIAL PHOTO	NO




J.F. New & Associates, Inc.
 706 Forest Hill Road
 P.O. Box 213
 Burlington, WI 54478
 Phone: 218-568-3400
 Fax: 218-568-3443

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Figure 10: Proposed Wetland Area and Buffer Strip Widening Along Cyrus Brouse Ditch



LEGEND	
DRAIN	---
DITCH	---
BASELINE	---
GAS LINE	---
ACRES	---
IN TRACT	---
BENEFITED	---
TOTAL BASIN ACRES	12.788
DRAIN LENGTH (MILES)	2.738
OPEN	1.007
TILE	1.731
DRAIN PICTURED ON AERIAL PHOTOS	1973-74 & 81

J.F. New & Associates, Inc.

708 Roosevelt Road
P.O. Box 243
Warrenton, OR 97146
Phone: 503-868-3400
Fax: 503-868-3448

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B. Nonpoint Source Water Pollution Control Grant Program

The Indiana Department of Environmental Management (IDEM) administers the Nonpoint Source Water Pollution Control Grant Program, which utilizes federal funds and state monies to fund nonpoint source pollution studies. The 1994 program is currently being established and information should be available approximately July 1. For further information, contact the Office of Water Management, IDEM (317-243-5145).

C. T-by-2000

The IDNR distributes funds through the T-by-2000 Program for erosion control projects. The program is "aimed at significantly reducing soil erosion and resulting sedimentation throughout Indiana within a definite time period." The two goals of this program are to "reduce erosion on each acre of land to its tolerable limit of T (the maximum level at which soil loss can occur without impairing crop productivity)" and to "control all off-site sedimentation using the best practical technology" by the year 2000. The five components of this program include soil conservation education assistance, agricultural erosion control technical assistance, cropland erosion control cost-share program, non-agricultural erosion control technical assistance and a lake enhancement program. The Lake Enhancement Program provides technical and financial help to control sediment and associated nutrient problems in public access lakes. For further information on T-by-2000 and its lake enhancement component, contact the Division of Soil Conservation, IDNR (317-233-3870).

D. Great Lakes Grants Program

Information on the Great Lakes Grants Program is not yet available.

E. Conservancy Districts

A conservancy district is a unit of local government with very limited and specific jurisdictional responsibilities, including authority to impose real estate taxes. Information on the process of forming a conservancy district is included in Appendix B.

F. Drainage Assessments

Fees collected by the Drainage Board for legal drains are used for maintaining and repairing the drains. The assessment and account balances for the four legal drains in the

Clear Lake watershed are listed below:

Ditch	assessment	balance (as of 5/93)
Peter Smith	\$ 1.00/acre	- \$ 3000
Cyrus Brouse	\$ 1.00/acre	\$ 1966
Harry Teeters	\$ 1.00/acre	\$ 3021
Alvin Patterson	\$ 0.42/acre	- \$ 74

Although there is not a lot of money available in these accounts, and two have negative balances, it is possible to use the funds to construct water control structures on the drain that would protect the drain and minimize repair work.

VII. SUMMARY

The Clear Lake Township Land Conservancy is concerned about the increasing eutrophication of their lake. A survey of the watershed revealed some protective measures, such as building wetlands and vegetated buffer strips which would reduce the sediment and nutrient load to the ditches, and ultimately to the lake. In addition, implementation of Agricultural Conservation Program practices are important in protecting the quality of the lake water. Although CLTLC cannot mandate land use within the watershed, the Conservancy should work closely with the Steuben County Soil and Water Conservation District and landowners to see that conservation practices are implemented. The most economical way to preserve the quality of the water in Clear Lake is to address the problem at the source.

Appendix A.

Agricultural Conservation Program Practices
Available in Steuben County

THE FOLLOWING ACP PRACTICES ARE
AVAILABLE IN THE COUNTY FOR 1993
FEEL FREE TO CALL THIS OFFICE
FOR DETAILS.



ELIGIBILITY - By law, program eligibility is limited to agricultural producers. For program purposes, an agricultural producer is an owner, landlord, tenant or sharecropper of a farm used to produce commercially: grains, row crops, seed crops, vegetables, hay, pasture, orchards, vineyards, flowers, bulbs, trees or field-grown ornamentals or other agricultural commodities, including livestock. A landlord or owner who leases his land for farming operations is eligible for cost-sharing on approved practices performed on such land if he bears as part of the cost of the practice. Eligible land is farmland used to produce the agricultural commodities identified above.

The "first-come, first-served" method of approving requests will not be used. Applications must be made before the work is started to be eligible for cost-sharing. The maximum cost-share limitation per person per fiscal year is \$3500.00. Signup is currently in progress.

Practices currently available:

- SL 1 PERMANENT VEGETATIVE COVER ESTABLISHMENT - Designed to provide permanent protection to farmland subject to serious wind or water erosion. The vegetative cover must be maintained without additional cost-sharing for a minimum lifespan of 5 years following the calendar year in which the cover was established. Soil test is required. Cost-share flat rates based on 50% of average cost.
- SL 4 TERRACE SYSTEMS - Designed to provide maximum control of erosion and sedimentation from cropland. The system shall be maintained for a minimum of 10 years following the calendar year of installation. Cost-share 50% of actual cost.
- SL 15 NO TILL SYSTEMS - Only In Limited Circumstances- To promote a method of installing tillage systems and residue management systems of farming that will (1) Protect soil from wind and water erosion and improve soil permeability. (2) Prevent or reduce pollution from sediment and chemically contaminated runoff from agricultural non-point sources. (3) Conserve energy. Cost-share \$10.00 per acre.
- WP 1 SEDIMENT RETENTION, EROSION OR WATER CONTROL STRUCTURES - Designed for specific problem areas on farms where runoff of substantial amounts of sediment or runoff containing pesticides for fertilizer constitute a significant pollution hazard. This includes any type of sediment detention or retention structure and any type of erosion control structure, such as overfall structures, chutes, etc. The structure shall be maintained for a minimum of 10 years following the calendar year of installation. Cost-share 50% of actual cost.
- WP 3 SOD WATERWAYS - For farmland needing permanent sod waterways to safely convey excess surface runoff water in a manner that will prevent erosion. The waterway is protected from erosion and reduces pollution through filtering out silt with the establishment of sod-forming grasses. The practice shall be maintained for a minimum of 10 years following the calendar year of installation. Cost-share 50% of actual costs.
- FR 1 FOREST TREE PLANTATIONS - For the establishment of trees or shrubs for forestry purposes and soil protection on suitable farmland which will provide multiple-purpose benefits. The practice shall be maintained for a minimum of 10 years following the calendar year of installation. Cost-share 65% of actual costs.

- FR 2 FOREST TREE STAND IMPROVEMENT - For improving and protecting a stand of desirable trees for timber production and to provide soil protection. This practice shall be maintained for a minimum of 10 years following the calendar year of installation. Cost-share 65% of actual cost.
- WL 1 PERMANENT WILDLIFE HABITAT - For the protection of farmland that is suitably located and adapted to the establishment of permanent wildlife habitat. The practice shall be maintained for a minimum of 5 years following the calendar year of installation. Cost-share 50% of actual costs.
- WL 2 WATER AREAS FOR WILDLIFE - To develop new or rehabilitate shallow water areas for wildlife on farmland suitably located and adapted for this purpose. This practice shall be maintained for a minimum of 10 years following the calendar year of installation. Cost-share 50% of actual costs.

Participation in programs administered by ASCS is open to all eligible farmers without regard to race, color, age, sex, religion, national origin or handicap.

Appendix B.

General Information on Conservancy Districts

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ATTORNEYS AT LAW
SUITE 401

INDIANA FEDERAL BUILDING
VALPARAISO, INDIANA 46383

AREA CODE 210
TELEPHONE 464-1041

QUENTIN A. BLACHLY
GLENN J. TABOR
JAMES S. BOZIK
QUANE W. HARTMAN
DAVID L. HOLLENBECK
DAVID L. DEBOER
THOMAS F. MACKIE
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RICHARD J. RUPCICH

GENERAL INFORMATION ON CONSERVANCY DISTRICTS

The general provisions controlling the creation and function of a conservancy district are found in Indiana Statutes at I.C. 13-3-3-1 through 102. A conservancy district is a limited form of special function district. It is a unit of local government with very limited and specific jurisdictional responsibilities.

The process of creating a conservancy district starts with the circulation of a petition. The petition must take a specific form and must include precise statements concerning the various statutory requirements for the creation of a conservancy district. The petition must contain a legal description of the proposed boundaries of the district. It must also contain a statement as to the specific purpose or purposes for which the district is to be established. A conservancy district can be established for any one of the following purposes:

- (1) Providing water supply, including treatment and distribution, for domestic, industrial, and public use.
- (2) Flood prevention and control.
- (3) Improving drainage.
- (4) Providing for irrigation.
- (5) Providing for the collection, treatment, and disposal of sewage and other liquid wastes.
- (6) Developing forests, wildlife areas, parks, and recreational facilities where feasible in connection with beneficial water management.
- (7) Preventing the loss of topsoil from injurious water erosion.
- (8) Storage of water for augmentation of stream flow.
- (9) Operation, maintenance, and improvement of any work of improvement for water based recreational purposes, or other work of improvement that could have been built for any other purpose authorized by this section.

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All freeholders within the boundaries of the proposed district are eligible to sign the petition. A freeholder is defined as anyone who is the owner of a freehold. A freeholder is a person who holds land in fee or for life, or for some indeterminate period of time, whether or not in joint title with one or more persons.

Obviously, the petition circulation process works best when it is coordinated by a steering committee or other group that is formed to advance the purpose of creating a conservancy district. It is important to monitor who is signing the petitions to assure that only freeholders' signatures appear. The needed number of signatures depends upon the total number of freeholds contained within the boundaries of the proposed district. As many as 30 percent of the freeholders and as few as 5 percent of the freeholders must sign the petition. The petition must be signed by freeholders owning land in the proposed district in the minimum number, or proportion of all the freeholders in the proposed district, as follows:

- (1) Districts of 1,000 freeholds or less, thirty percent (30%) of the freeholders.
- (2) Districts of 1,001 to 5,000 freeholds, fifteen percent (15%) of the freeholders, but not less than 300 signatures.
- (3) Districts of 5,001 to 25,000 freeholds, ten percent (10%) of the freeholders, but not less than 750 signatures.
- (4) Districts of 25,001 freeholders or more, five percent (5%) of the freeholders, but not less than 2,500 signatures.

A petition may be filed by a municipality by ordinance adopted by its legislative body. The petition may be filed to initiate a proposed district that includes land solely inside the corporate limits of the municipality or partially inside and partially outside the corporate limits of the municipality.

Once the signature acquisition process is completed, the petition for creation of a conservancy district is filed with the circuit court of the county wherein the proposed district is located. After the filing of the petition, the circuit court schedules an initial hearing. A notification process must be completed prior to the conducting of that initial hearing. At the initial hearing, the circuit court reviews the petition to determine whether or not they contain the requisite number of signatures and also to confirm that the petition is in proper form. If the court rules favorably on both of those matters, the Judge will then refer the petition to the Natural Resource Commission of the

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Indiana Department of Natural Resources. That state agency is charged with the statutory responsibility of investigating the appropriateness and feasibility of the creation of all conservancy districts. That state agency must report back to the circuit court as to its recommendations concerning the establishment of the proposed conservancy district within 120 days of the referral of the matter. The IDNR will assign the matter to an Administrative Law Judge who will conduct a public hearing in the county where the proposed district is located. At that public hearing the petitioners will have an opportunity to present the basis for their request that a district be created. It is usually important that the petitioners retain an engineer who can testify at the hearing on behalf of the petitioners. IDNR is statutorily charged with the responsibility of making a determination as to the feasibility of the creation of the proposed district and to report to the court as to whether or not the proposed district:

- (1) appears to be necessary;
- (2) holds promise of economic and engineering feasibility;
- (3) seems to offer benefits in excess of costs and damages as to purposes other than water supply, storage of water for augmentation of stream flow, or sewage disposal, and whether the public health will be served immediately or prospectively by the establishment of the district as to the purposes of water supply, sewage disposal, storage of water for augmentation of stream flow, or any combination of them;
- (4) proposes to cover and serve a proper area; and
- (5) could be established and operated in a manner compatible with established conservancy districts, flood control projects, reservoirs, lakes, drains, levies, and other water management or water supply projects.

After the public hearing, the Administrative Law Judge from IDNR will prepare and file a report with the circuit court. Upon receipt of that report, the circuit court Judge then schedules a third and final hearing whereat a determination is made on the creation of the district. The entire process of creating a conservancy district will normally take approximately six to eight months.

A district established for the propose of furnishing water supply for domestic, industrial, and public use may elect to furnish water supply under the provisions of I.C. 13-3-4-1 through 16. In so doing, a conservancy district is exempted from obligation to pay gross income tax on the proceeds of water sold to customers pursuant to I.C. 6-2.1-3-33.

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A conservancy district is governed by a Board of Directors. The circuit court order creating a conservancy district will recite the number of members who will serve on the Initial Board of Directors. This number can be as many as nine or as few as three. The Initial members of the Board of Directors are appointed by the Board of County Commissioners to initially staggered terms ranging from one to four years. As each of those initial terms expire, each new director serves a full four year term. After the initial appointments, all membership positions on the Board of Directors are elected by the freeholders who own land within the conservancy district at the annual meeting of the conservancy district which occurs no later than March 31 of each year.

The first responsibility of the Board of Directors is to complete and file with the circuit court a district plan. This district plan must include a comprehensive review of the nature and extent of the purposes for which the district was created and outline the means and mechanisms available to the Board of Directors to implement programs to complete those purposes. This district plan is normally completed by an engineer and must be filed with the circuit court and with IDNR within 120 days after the appointment of the Initial Board of Directors. The district plan must be approved by IDNR and the circuit court.

As a special function district, a conservancy district is statutorily empowered to impose a real estate tax. Whether or not a tax is imposed is initially the decision of the Board of Directors. If it is decided to implement a real estate property tax, the Board of Directors must establish a budget and conduct public hearings on the proposed tax rate much like any other unit of local government. The proposed taxation level must then be submitted to the State Board of Tax Commissioners, and that state agency ultimately decides the tax rate issue. The process of establishing a conservancy district tax rate is very similar to the statutory procedure that must be followed by a municipality in order to establish its annual tax rate. A conservancy district can also establish a cumulative building and development fund in order to set aside monies for future capital projects and implementation of a replacement and maintenance program.

The Indiana Conservancy District Act empowers a Board of Directors of a conservancy district to initiate two types of taxation. A "special benefits" tax is available to a conservancy district. Such a tax is only "special" in that it applies to all property located within the conservancy district and does not apply to property outside of the conservancy district. This tax is implemented exactly like the normal real estate property tax assessed by other units of local government and is based upon the assessed valuation of the property contained within

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the boundaries of the district. A conservancy district can also impose an "exceptional" benefits tax. This tax is much more difficult to impose and is implemented much like a "ditch" tax is assessed. It is based upon the theoretical improvement to a piece of property that results from any projects implemented by the conservancy district. The "exceptional" benefits tax is used in those instances where there is an appreciably greater benefit derived by a small portion of the real estate contained within the conservancy district.

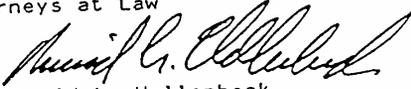
A conservancy district is also statutorily empowered to issue both revenue and general obligation bonds. The conservancy district bonding authority is exercised very similarly to that procedure utilized by any other unit of local government in Indiana.

There is also a statutory provision which enables the freeholders to dissolve a conservancy district if it is no longer needed. A conservancy district is an eligible applicant for numerous federal and state grant and loan programs.

This has not been intended as an exhaustive or completely comprehensive analysis of every aspect of the creation and function of a conservancy district. However, hopefully it gives you an overview and has answered at least some of your preliminary questions and concerns.

BLACHLY, TABOR, BOZIK & HARTMAN
Attorneys at Law

By:


David L. Hollenbeck

DLH/bjd